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## Original Articles.

### THREE CASES OF TETANUS CURED BY SUBCUTANEOUS INJECTIONS OF ANTI-TETANIC SERUM.*

By J. COMBY,

*President de la Société Médicale des Hôpitaux, Médecin des Enfants Malades, Paris.*

IT is well known that subcutaneous injections of anti-tetanic serum have a preventive action as regards tetanus. In the case of a wound soiled by the earth of the streets, high roads, or fields, an injection of 10 to 20 c.c. of this serum as soon as possible is indicated. This practice has been adopted by the majority of surgeons. On this point we are almost all agreed. The same cannot be said of the curative action of the serum, which is admitted by some and disputed by others. Some experimenters wishing to enforce the action of the serum by bringing it close to the seat of the disease have proposed injecting it into the cerebral substance. Chauffard and Quénu, at the suggestion of Roux and Borrel, of the Institut Pasteur, L. Ombrédanne ('Presse Médicale,' 1898), W. J. Gibb ('Brit. Med. Journ.,' August the 15th, 1899), Letoux ('Anjou Médical,' September, 1899) have cured tetanus in young persons by

* A paper read before the Société Médicale des Hôpitaux de Paris on October the 9th, 1914.

injecting into the brain, after trephining, 2 to 3 c.c. of anti-tetanic serum; Letoux has injected as much as 10 c.c. into each hemisphere. L. Delmas ('Presse Médicale,' September the 17th, 1898) has not been successful with this method.

In the case of a girl whom L. Ombrédanne kindly trephined and injected for me, I was unfortunately unable to prevent a fatal issue ('Arch. de Méd. des Enf.,' August, 1899). The success of intra-cerebral injection, therefore, which requires the assistance of a good surgeon, is by no means invariable.

The same is to be said of intra-spinal injection, which is a much simpler procedure, thanks to lumbar puncture. Both successes and failures have resulted from the use of this method.

F. Peruzzi ('La Pediatria,' July, 1908) cured a case of tetanus in a boy, aged 7 years, by eight intra-spinal injections of serum, each containing 10 c.c. (80 c.c. in all); the serum came from Berne. In five other cases treated in the same way the result was *nil*.

After this failure, having two other cases of tetanus to treat, he injected at once into the spinal canal 30 c.c. of serum, and recovery took place. He therefore advocates massive intra-spinal injections of anti-tetanic serum.

Subcutaneous injections of anti-tetanic serum have often been employed and in large doses. J. Galletly ('Brit. Med. Journ.,' February the 18th, 1899) cured a boy, aged 8 years, by repeated injections of serum (240 c.c. in a fortnight); Murray ('Ind. Med. Record,' March the 28th, 1914) cured a boy, who had contracted tetanus from a wound in the foot, by nine injections of anti-tetanic serum (one daily, in all 90 c.c.). In Letoux's case, that of a boy, aged 14 years, who had been given two intra-cerebral injections of 10 c.c., one must also take into account the numerous subcutaneous injections which were given (ten from May the 7th to May the 22nd, or 105 grm. of the anti-tetanic serum of the Institut Pasteur). V. Barachini ('Gazz. d. Osp.,' January the 7th, 1900) cured a boy, aged 13 years, by two subcutaneous injections in the thigh of Tizzoni's anti-tetanic serum (50 c.c. in all). This serum was employed at Pisa in the same manner in five other cases with successful results. S. H. Long ('Brit. Med. Journ.,' November the 24th, 1900) cured a boy, aged 13 years, with thirteen subcutaneous and fifty-five rectal injections of anti-tetanic serum (680 c.c. in all). In a case of tetanus neonatorum in a female infant, aged 13 days, treated by J. MacCaw ('Brit. Med. Journ.,' March the 30th, 1901) cure was obtained by two subcutaneous injections of anti-tetanic serum from the Institut Pasteur (3 c.c. and 2 c.c. respectively).

The same result was obtained by L. Morquio ('Rev. Med. del Uruguay,' November, 1903) in a newborn infant, aged 12 days, after three subcutaneous injections of anti-tetanic serum (5 c.c. each, a total of 15 c.c.). W. Winslow Hall ('Brit. Med. Journ.,' March the 9th, 1907) cured a child, aged 8 years, by three subcutaneous injections of anti-tetanic serum (60, 30, and 30 c.c. or 120 c.c. in all). In the case of a boy, aged 8 years, who had contracted tetanus from a wound in the buttock by a fall on a rake, L. Martin and H. Darré ('Soc. Méd. des Hôp.,' June the 25th, 1909) gave successively a subcutaneous injection of 20 c.c. of anti-tetanic serum, an intra-venous injection of 80 c.c., a subcutaneous one of 40 c.c., and lastly two more on the same day of 40 c.c. (220 c.c. in all).

In an infant, aged 9 days, suffering from tetanus, E. Leuret and G. Buard ('Gaz. hebd. des Sci. Méd. de Bordeaux') gave three subcutaneous injections of 5 c.c. of anti-tetanic serum. Death, however, took place.

G. Menabuoni ('Rev. di Clin. Ped.,' March the 10th, 1911) from 1901 to 1911, at the Pædiatric Clinic at Florence, treated seven cases of tetanus in children by different methods: (1) Male infant, aged 25 days; tetanus from umbilical infection; 10 c.c. of cerebro-spinal fluid were withdrawn by lumbar puncture, and 8 c.c. of Milan anti-tetanic serum were injected on January the 15th; on the 16th another lumbar puncture was made and 9 c.c. were injected; on the 19th and 21st 8 c.c. were injected (four intra-spinal injections of 33 c.c. in all); recovery. (2) Boy, aged 4 years; tetanus following wasp bite on left arm; in the course of four days a million units of Tizzoni's serum were given subcutaneously; recovery. (3) Girl, aged 3 years; wound of tongue; two subcutaneous injections of Tizzoni's serum (one million units); recovery. (4) Girl, aged 4 years; intra-spinal injection of 8 c.c. of Kolle's serum; subcutaneous injection two days later; third injection on seventh day; recovery. (5) Girl, aged $7\frac{1}{2}$ years; death in spite of subcutaneous injection of 10 c.c. of Kolle's serum. (6) Boy, aged 7 years; treatment by injection of carbolic acid (Baccelli's method); death. (7) Boy, aged 10 years; intra-spinal injection of 10 c.c. of Berne anti-tetanic serum; fresh injection three days later; then injection of 3 per cent. carbolic acid and serum; recovery.

H. Beates and B. A. Thomas ('Monthly Cyclopædia and Med. Bulletin,' June, 1911) treated a boy, aged 14 years, suffering from tetanus following a badly dressed vaccination wound. Three weeks after vaccination, which was performed on the left thigh, signs of

contracture developed. On the fourth day a subcutaneous injection of 3000 units of anti-tetanic serum was given, and at the same time 2 c.c. of 25 per cent. magnesium sulphate solution were injected intra-spinally, followed seven hours later by a subcutaneous injection of 12,000 units of serum and an intra-spinal injection of magnesium sulphate. Fifth day: 15,000 units of serum and 2 c.c. of magnesium sulphate solution; 11 p.m.: 15,000 units of serum and 3 c.c. of magnesium sulphate solution. Sixth day: A more powerful serum (15 c.c., representing 17,700 units) was injected in the morning; in the evening 25 c.c. (29,500 units) were injected, and 5 c.c. of the magnesium sulphate solution were given intra-spinally. Seventh day: Intra-spinal injection of 5 c.c. of concentrated serum (5900 units) and a subcutaneous one of 29,500 units; 11 p.m.: Intra-spinal injection of 5 c.c. of magnesium sulphate solution and subcutaneous injection of 35,000 units. Eighth day: 5900 units intra-spinally and 29,500 units subcutaneously; in the evening 3500 more units intra-spinally and 7080 units subcutaneously. Tenth day: Another subcutaneous injection of 7080 units; recovery.

More recently J. Renault ('Soc. Méd. des Hôp.,' November the 8th, 1912) successfully treated a case of tetanus in a boy, aged 11 years, by massive subcutaneous injection of anti-tetanic serum (260 c.c. in five days).

This review of the literature, though very incomplete, shows that numerous successes are to be attributed to anti-tetanic sero-therapy, whether subcutaneous, intra-cerebral, intra-spinal or intra-venous.

The cases I am showing to-day support this method of serum treatment, which we should not recommend if care had been taken to make use of preventive sero-therapy in the majority of contaminated wounds.

Case 1.—*Boy, aged 11 years; wound of great toe. Tetanus nineteen days later; subcutaneous injections of anti-tetanic serum, 200 c.c. in eight days; recovery.*

A boy, aged 11 years, was admitted to my service at the Hôpital des Enfants Malades on August the 19th, 1914.

*Family history.*—Father, aged 42 years, healthy. Mother, aged 35 years, also healthy; three other children in good health.

*Previous history.*—Patient was born at full term, breast fed, soon learnt to walk, and had a normal dentition. Measles and whooping-cough during the first two years of life.

*Present illness.*—On July the 29th the child caught his foot in a railway turn-table and developed a contusion of the right great toe; sutures were only put in on August the 1st, three days after the accident. On August the 16th, nineteen days after the injury, which had not appeared serious, the child complained of pain in the neck and had difficulty in opening his mouth. He was sent to hospital three days later. We

found the child pale, looking ill, and making grimaces. He had trismus and could not open his mouth nor articulate. He had also nuchal rigidity and tetanic convulsions of the trunk, which recurred spontaneously or on the slightest stimulus. The pulse kept at about 120, and the rectal temperature was not more than 38° C., and the following days fell to 37·7°, 37·8°, 37·5°, reaching 37° C. on August the 31st.

On the evening of admission to hospital (August the 19th) my house physician, Mlle. Condat, gave the child a subcutaneous injection of 40 c.c. of anti-tetanic serum from the Institut Pasteur. August the 20th: Fresh injection of 20 c.c., and on the following days until the 26th daily injections of 20 c.c. In all the child was given 200 c.c. in eight injections. He also received an enema of chloral and bromide morning and evening. He could swallow fluids only (milk and water).

The injections of serum were well borne, but on September the 4th (eight days after the last injection) the temperature rose again for three days (38·2–38·4° C.) and the child complained of pain in the joints (serum arthralgia), and at the same time an urticarial eruption appeared. The serum sickness lasted three days.

The tetanic spasms, which at first recurred eight or ten times a day, became gradually less frequent and less severe. The child soon became able to open his mouth and articulate a few words. When the serum phenomena developed, the battle was won and the disease jugulated.

The child was discharged convalescent on October the 1st.

This case shows as well as those which I have quoted: (1) The harmlessness of large and repeated doses of anti-tetanic serum; (2) the success of large doses of anti-tetanic serum in young persons. However, we will not conceal our preference for preventive sero-therapy, especially at the present time, and we should like all those injured in the streets, as all the wounded on the field of battle, to receive if possible a preventive dose of 10–20 c.c. of anti-tetanic serum. One could thus avoid the large expenditure of serum required for curative sero-therapy to have any success. A few years ago I cured a case of tetanus with much smaller doses of serum.

Case 2.—*Boy, aged 13 years; tetanus following wound in thigh by a fragment of wood; recovery after five subcutaneous injections of anti-tetanic serum* (50 *c.c.*).

Boy, aged 13 years, admitted to my service at the Hôpital des Enfants Malades on January the 4th, 1911, for tetanus.

*Family history.*—Father died at fifty-four from laryngitis; mother, aged 55 years, is healthy. A brother died of tuberculosis, another brother and one sister are healthy.

*Previous history.*—Breast fed; no previous disease; development normal.

*Present illness.*—On December the 13th, 1910, while acting as joiner's apprentice he was taking a rosewood plank downstairs when he was wounded by a splinter, which passed deep into the right thigh. It was not till the next day that the wound was dressed with peroxide of hydrogen and cauterised with tincture of iodine. On January the 1st, eighteen days after the accident, when the wound seemed healed, he noticed stiffness in the wounded leg, with convulsive movements from time to time and trismus during meals. The following days the trismus increased, and on the fourth day after the onset of the contractures the child was taken to hospital.

*Condition on admission.*—Jaws closed tightly, deglutition difficult, rigidity of the trunk; child also complains of pain in the spine. Fairly frequent convulsive move-

ments. Contracture of the abdominal muscles. Hardly any fever, temperature only exceptionally as high as 38° C. Pulse very frequent—120, 130, 150. The patient was placed in a room draped in black and given a liquid diet and bromide and chloral enemata. January the 4th, the day of admission, first subcutaneous injection of 10 c.c. of anti-tetanic serum; dose repeated on 5th, 6th, and 7th. Very rapid improvement; fifth and last injection of 10 c.c. on the 11th (50 c.c. in all). Perfect recovery.

After the treatment the child complained of very severe pain in the right hip (perhaps serum arthralgia). To relieve him we ordered morphia (1 cgrm. in subcutaneous injection) and a liniment of chloroform and laudanum. Recovery was not delayed by this unpleasant occurrence.

This case as compared with the last shows that anti-tetanic serotherapy may succeed even when relatively moderate doses are given. It may succeed even after a single large dose, as the following case shows.

Case 3.—*Boy, aged 12 years; tetanus following wounds of the knees; subcutaneous injection of 40 c.c. of anti-tetanic serum; recovery.*

Boy, aged 12 years, admitted to my service at the Hôpital des Enfants Malades on May the 18th, 1909, for tetanus.

*Family history.*—Father died of phthisis; mother healthy; one brother died at one month, two twin sisters died at an early age, one sister, aged 8 years, under treatment for enlarged bronchial glands.

*Previous history.*—Born at full term. Bronchitis at 20 months, varicella at 3½ years, aryngitis at 4 years.

*Present illness.*—He fell down about a month ago, causing injuries to his knees, which at present are almost healed and cause no pain. On May the 11th, three weeks after the accident, he felt a pain below the shoulders and then in the thighs. On the 13th onset of trismus and stiffness of neck. Taken to a children's dispensary he was regarded as a probable case of cerebro-spinal meningitis and sent to the Hôpital des Enfants Malades. On admission we found generalised muscular contracture, inability to open the mouth, stiffness of the neck and back, rigidity of abdominal muscles, and very painful attacks of contractures on the slightest stimulus. The diagnosis of tetanus was written on the patient's face.

The temperature was only very slightly raised—37·2°, 37·4°, 37·5° C. Pulse 100. Lumbar puncture gave issue to normal cerebro-spinal fluid. A subcutaneous injection of 40 c.c. of anti-tetanic serum from the Institut Pasteur was given on the day of admission to Hospital. Improvement during the following days. Serum erythema on May the 25th, seven days after injection. Recovery without further incident.

It should be noted that in these three cases, which ended in recovery, the incubation period was very long—eighteen, nineteen, and twenty days respectively. It seems that tetanus which rapidly ollows infection of the wound is more virulent than that of later onset.

In a girl, aged 13 years, who died in my service and whose case was published by A. Broca ('Arch. de Méd. des Enf.,' July, 1914),

tetanus having followed a sloughing wound of the thorax due to the compression of a felt and plastic jacket for correction of scoliosis by Abbott's method, the incubation period was very short and the disease fulminating. The child died in less than forty-eight hours, in spite of subcutaneous injections of anti-tetanic serum.

The duration of the incubation period should therefore be taken into account in forming a prognosis. With a long incubation period the course of the disease is long and the prognosis good, with a short incubation the course is rapid and the prognosis almost always fatal.

The same conclusions may be drawn from the recent communication of C. Walther on September the 29th, 1914, at the Académie de Médecine on "The Ætiology and Prophylaxis of Tetanus in Men wounded in War."

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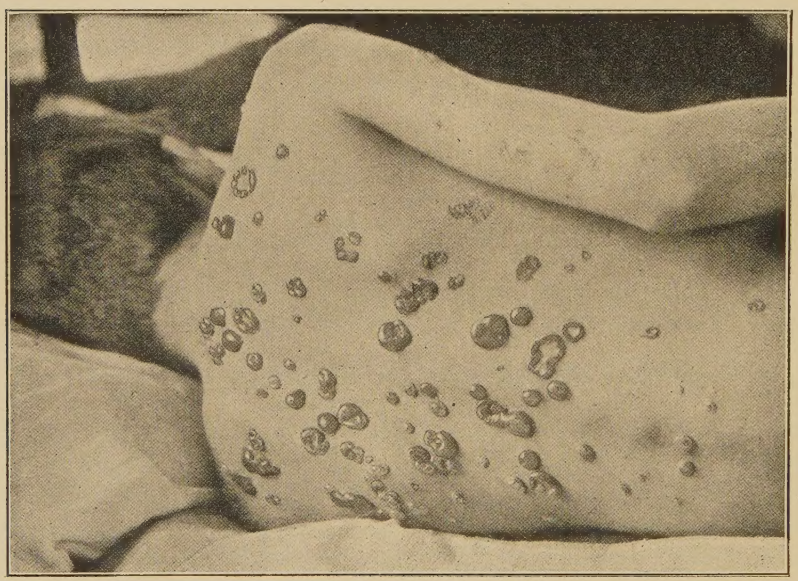
## ACUTE PEMPHIGUS COMPLICATING SCARLET FEVER.

By J. M. Robertson-Ross, L.M.S.S.A.,
*Assistant Medica Officer, Grove Fever Hospital, London.*

A boy, aged 10 years, was admitted to hospital with scarlet fever on May the 27th, 1914, on the second day of the disease. The attack was moderately severe, and was complicated by cervical adenitis on the sixteenth day and right otorrhœa on the twenty-second day. On June the 25th, the thirty-second day of the disease, as the adenitis was subsiding a crop of four or five blisters appeared on the front of the right ankle, and the temperature rose to 102° F. As the eruption had not been noticed on the previous day when he had been bathed, it was at first thought that the right leg had been accidentally scalded. During the next twenty-four hours an extentive bullous eruption appeared on the back and to a less extent on the limbs. The lesions commenced as small, pink, slightly raised patches, with a ring of small vesicles at the periphery. These gradually increased in size and coalesced so as to form eventually oval or irregularly shaped bullæ. The mode of onset is well illustrated in the accompanying photograph, which shows the lesions in the various shapes, the ring formation being particularly well seen. On June the 29th the eruption was general on the back from the level of the sixth cervical to the twelfth dorsal spine, and bullæ were also present on the right shoulder, the antero-external surface of the right arm, the front of the right ankle, and outer side of the

left leg. Subsequently they appeared on the left side of the forehead and spread over most of the scalp. The mucous membranes were at no time affected. Fresh lesions continued to appear until July the 8th. The fluid in the bullæ was at first clear, but afterwards tended to become turbid, but was never purulent. Two cultures were made; the first taken on June the 30th was sterile after twenty-four hours' incubation, the second, taken on July the 8th, yielded an abundant growth of staphylococci. A differential blood count made on June the 29th showed: Polymorphonuclears 71 per



cent., large mononuclears 4 per cent., small mononuclears 4 per cent., eosinophiles 3 per cent.

Each bulla increased in size for about three days, when the largest of them was 2 in. by 1 in. in diameter. They then either ruptured and discharged their contents or else dried up and formed a scab without previous rupture. During the healing process secondary lesions appeared in the course of the discharging fluid, and it was noticed that these were bullous from the first without any preliminary erythema or vesicles at their periphery. On August the 11th, forty-eight days after the onset of the eruption, all the bullæ had disappeared, leaving erythematous stains with an area of clear skin in the centre. Throughout the attack the temperature

remained irregular, varying between 99° and 102° F., and did not finally become normal till August the 9th. The general condition remained good throughout, and local pain and irritation were very slight. No local treatment was employed beyond the application of clean lint jackets and boracic dusting powder. Liquor arsenicalis, at first in 3 minim doses, subsequently increased to 8 minims, combined with Ferri. et ammon. cit. gr. v, was given internally *t.d.s.*

The patient was finally discharged in good health on September the 2nd, 1914, still showing the pink staining where the eruption had been.

The occurrence of a bullous eruption suddenly commencing in one region and rapidly assuming a fairly general distribution accompanied by an irregular pyrexia and running a course of little more than six weeks would seem to warrant a diagnosis of acute pemphigus. Though several cases of pemphigus have been observed after vaccination, I have not been able to find any mention of the association of pemphigus with any of the other specific fevers. The disease described by Leiner in this JOURNAL * under the name of pemphigus acutus contagiosus in many cases followed measles, but clinically it does not seem to have resembled the present case.

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## A CASE OF UNEXPLAINED ŒDEMA AND PEMPHIGUS IN CONVALESCENCE FROM SCARLET FEVER.

By R. LOY WILCOX, M.R.C.S., L.R.C.P.,
*Assistant Medical Officer, South-Eastern Fever Hospital, London.*

A GIRL, aged 13 years, was admitted to hospital for scarlet fever on November the 7th, 1913, on the third day of disease.

The attack was not severe and was followed by typical desquamation. On November the 29th, three days after she had been allowed to get up, she developed marked œdema of the ankles and wrists. Deep pitting was present. There were no other signs or symptoms except a slight petechial eruption, which was more or less general, but most marked on the thighs and legs. The œdema passed off in a few days, and the petechial rash soon faded. No cause for the œdema could be discovered. The heart was normal, and at no time did the urine contain any albumin. On December the 11th, two days after the child had been allowed to get up again, two large vesicles were found on the right foot, and a

* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1908, vol. v, p. 371.

severe attack of pemphigus developed. The face, trunks and limbs were all affected, but the severest lesions were on the legs and arms, some measuring 1 in. in diameter.

The condition waxed and waned, and many areas of the skin were affected more than once. Some improvement seemed to follow the use of liquor arsenicalis, which was given in 5 minim doses *t.d.s.* on January the 7th, and increased to 7 minims on January the 19th. As local treatment liquor carbonis detergens and subsequently lotio calaminæ were used, and the affected areas were covered with dry boracic lint.

Fresh bullæ continued to appear until February the 2nd, when only two small lesions remained on the left foot, and the child was sent home. Throughout the attack the patient's general condition was good, and the temperature remained normal.

The eruption broke out again soon after the child returned home, but subsequently became quiescent, and lately I have been unable to obtain any news of her.

The interesting features of this case are that the pemphigus occurred in convalescence from scarlet fever, that it was preceded by an unexplained œdema, and that otherwise the attack of scarlet fever was free from any complications.

## Royal Society of Medicine.

### SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

*Friday, November the 27th,* 1914.

*The President,* Mr. T. H. Kellock, *in the Chair.*

**Child with Tooth Erupted at Birth.**—Dr. E. B. Gunson showed a male infant, one of twins born at full term. The left lower median incisor was erupted at birth. On the tenth day the tooth, which was then loose and attached only by the gum, was removed as its presence interfered with suckling. The right lower median incisor had then also appeared through the gum. The child was well developed and presented no other abnormality. The fellow twin was normal.

**Friedreich's Disease with Spastic Phenomena.**—Dr. J. Porter Parkinson showed a boy, aged 13 years, the ninth of ten children; his mother's eleventh pregnancy terminated in a miscarriage. For three years before patient's birth the mother was very depressed and almost insane. Patient was a full-term child, healthy at birth, but before the age of three

years had had scarlet fever, measles, chickenpox, whooping-cough, and diphtheria. He began to walk at three years, but never had walked well, and was never very intelligent. He began to stammer two years ago.

He was now a fairly well grown boy with a rather unintelligent expression. Speech indistinct, slurred and syllabic. Gait spastic, uncertain; slight difficulty in turning. Romberg's sign negative. The legs were held stiffly, the muscles hard and well developed; the foot showed marked pes cavus with some equinus; the great toe was hyperextended at the proximal joint, and the extensor tendon very prominent. There were marked knee and ankle clonus and an extensor plantar reflex. The arms were in every way normal, grasps equal, no ataxy of arms or legs. Cranial nerves normal, no nystagmus, and no changes in the fundi. Spine normal, and bladder and rectum not affected. Sensation normal. No similar disease in the family.

**Tumour of the Upper Extremity of the Femur.**—Mr. L. Bromley showed a boy, aged 12 years. The patient was admitted to hospital on June the 13th, 1914. A swelling of the right thigh had been noticed for the previous seven or eight weeks. He complained of pain in the right leg, especially after walking; on some days the pain was so severe that he was unable to walk. When he was aged 3 years he was said to have fractured the right femur; since then he had had intermittent pains of an aching character, which had increased lately.

On examination a hard swelling of the upper third of the right femur was felt. There was no definite margin, and no heat or tenderness. Movements of the hip-joint were free. Skiagraphic examination showed an endosteal growth of the femur.

On exploration the bone was found to be expanded and covered by normal periosteum; a thin layer of compact bone surrounded a mass of cartilage which had entirely replaced the medullary cavity. Microscopic examination showed it to be pure chondroma with no suggestion of malignancy.

**Two Cases of Heart-block.**—Dr. T. R. Whipham.—Case 1: Female infant, aged 2 years 2 months. The child was born at full term, and had always been backward. The first tooth was not cut until the age of nine months, and she did not sit up until she was a year old. Up to the present she had not walked or talked. She was a well-nourished child, with a good colour, and presented no clubbing of the digits. Pulse slow, full, and regular. The right side of the heart in the skiagram appeared to be enlarged, and the outline of the organ was almost globular. All over the præcordium a loud systolic bruit was audible, the maximum intensity being between the apex and the left sternal border, and extending up to the pulmonary area. The heart-rate was slow, but varied from time to time, the lowest recorded being 48 and the highest 80. The child was first admitted to hospital with whooping-cough, but even then the heart was only beating about 64 per minute, and at times the respirations were quicker than the pulse. Paroxysms of coughing, moreover, caused very little, if any, acceleration of the heart. No cardiac symptoms had at any time been observed. An electro-cardiogram showed a perfectly regular 2 : 1 heart-block. There was a polycythæmia of 8,400,000 red corpuscles per cubic millimetre and the hæmoglobin value was 110 per cent.

Case 2: A girl, aged 12 years. Except measles at an early age, she had had no illness. Six years ago it was first noticed that she had a slow pulse, but it was not until eighteen months ago that any cardiac symptoms occurred;

since then she had complained of pain around the heart on exertion. The pulse was slow, usually between 50 and 60 per minute, and slightly irregular in rhythm; the extreme rates noted had been 40 and 64. The heart was considerably enlarged, especially on the left side, and there was a heaving impulse in the fifth interspace well outside the nipple line. A systolic bruit was audible, with its maximum intensity in the fourth interspace near the sternum; occasionally at the apex and a little outside a slight diastolic whiff had been heard. The second sound in the pulmonary area was at times re-duplicated. An electro-cardiogram and a polygraph tracing showed a marked dissociation between the auricular and ventricular beats, and an irregularity in the rhythm of the latter. A subcutaneous injection of atropine sulphate ($\frac{1}{60}$ gr.) caused the ventricular rate to be increased from 40 to 60 per minute, but did not affect its arrhythmia.

**Diabetes insipidus with Infantilism.**—Dr. T. R. Whipham showed a boy, aged 4 years, the sixth child in a family of eight, all of whom had been backward. He was bottle-fed, and cut his teeth late, and did not walk until he was two years old; he could not yet talk. Height, 2 ft. 9 in.; weight, 1 st. 6½ lb. About two years ago he started to pass a large quantity of urine, to complain of great thirst, and to lose flesh. On admission to hospital he was passing from 200 c.c. to 900 c.c. of urine *per diem*, but under general treatment and rest the maximum had been 300 c.c. in a day. The urine was very pale, of low specific gravity, and contained no abnormal elements.

**Case of Giant Nævus.**—Dr. J. D. Rolleston showed a girl, aged 7 years, with a pigmented, hairy and warty nævus and numerous accessory nævi. The principal nævus started in front, slightly internal to the anterior border of each sterno-mastoid, and passed backwards, occupying each posterior triangle of the neck and extending 1 in. below each clavicle. Behind it extended as a continuous sheet upwards to the external occipital protuberance, outwards to the acromion process and downwards to the spine of the twelfth dorsal vertebra, where it ended in a tapering point.

The pigmentation of the nævus was dark brown, interspersed with vitiliginous patches, and was interrupted at the periphery by linear areas of unpigmented skin running obliquely downwards and outwards. The skin of the pigmented area was sharply marked off, but was not raised above the level of the normal skin, and showed no sensory changes. There was no spina bifida. The nævus was covered by downy hairs mostly of a light colour, except in the interscapular region where they were darker. Several warty growths of the same colour as the pigmented skin were present in the cervical and upper dorsal area of the nævus, the largest being situated just below and to the left of the external occipital protuberance.

In addition to the principal nævus other nævi were scattered over the rest of the skin. The largest were situated on the right thigh and right buttock. Most of the lesions situated on the limbs were hairy, but a few were smooth. A few smooth nævi were present on the soles, but the palms were free. The fewest and smallest lesions were on the face.

There was no hereditary nor familial history of similar lesions, but there was a definite history of a maternal impression. During the third or fourth month of pregnancy the mother had been frightened by a black and tan dog which had tried to bite her husband, and had thrown her arms over her head. She had anticipated that the child would be marked, though her doctor had tried to persuade her to the contrary.

**Splenomegaly improved by Antisyphilitic Treatment.**—Dr. Bernard Myers showed a male infant, aged 1 year 11 months, admitted to hospital last June (then aged 18 months) for diarrhœa and wasting. His weight at that time was 9 lb. 8 oz.

When first examined in June he presented a very wasted appearance. The child was listless, anæmic, of an earthy complexion, and with a sunken fontanelle. Some signs of rickets were present. There were about six motions in the twenty-four hours. The temperature and pulse were normal on admission, while the respiratory rate was slightly raised. The spleen was enlarged, moderately firm, and extended to just below the level of the umbilicus. The edge of the liver was felt $1\frac{1}{2}$ in. below the costal margin. No albumin was discovered in the urine, which was acid and of specific gravity 1020. The Wassermann and von Pirquet reactions were both positive.

The blood count on June the 17th was: Red blood corpuscles 3,040,000 per cubic millimetre; hæmoglobin 44·0 per cent.; leucocytes 14,000 per cubic millimetre; polynuclears 35·8 per cent.; lymphocytes 54·8 per cent.; large mononuclears 6·0 per cent.; transitionals 1·4 per cent.; myelocytes 2·0 per cent.; normoblasts 3·0 per cent.; megaloblasts 1·2 per cent.

A provisional diagnosis of splenic anæmia of infancy was made. Hydrarg. c̄ creta, $\frac{1}{2}$ gr. *t.d.s.*, together with a bismuth mixture, were given. Some slight improvement only being noticeable, this treatment was stopped in favour of mercurial inunction over the region of the spleen. The diet consisted of milk in various forms, arrowroot, meat-juice, and small quantities of brandy. Distinct and steady improvement followed the inunctions. The diarrhœa gradually ceased, his appearance became healthier, and his face, body and limbs filled out. The spleen became noticeably smaller week by week.

On November the 20th a blood count showed: Red blood corpuscles 6,130,000 per cubic millimetre; hæmoglobin 100·0 per cent.; leucocytes 16,600 per cubic millimetre; polynuclears 57 4 per cent.; lymphocytes 19·6 per cent.; large mononuclears 16·8 per cent.; transitionals 3·0 per cent.; eosinophiles 3·2 per cent.; normoblasts 1·0 per cent.

The red blood corpuscles appeared normal in size and shape. Wassermann's reaction was positive, although not strongly marked.

**Case of Double-retained Testicle in which the Left Testicle was transplanted to the Right Side of the Scrotum and the Right Testicle to the Left Side.**—Dr. Philip Turner.—A boy, aged 12 years, was admitted to hospital on May the 17th for double inguinal hernia with imperfectly descended testicles. Both testicles, which appeared to be ill-developed, could be palpated in the inguinal canals; they had never descended below the external abdominal rings. The following operation was performed: The right sac and spermatic cord were exposed by a small incision through the external oblique just above the internal abdominal ring. The hernial sac was separated from the vas and veins as far as the internal ring, and there ligatured. By traction on the distal part of the sac the testicle was drawn through the small incision in the external oblique. The sac was then ligatured immediately above the tunica vaginalis and removed. The remains of the gubernaculum were then transfixed, ligatured, and divided, the ends of the suture being left long. The testicle, enclosed in the tunica vaginalis, was now, except for its connection with the spermatic cord, quite free. An incision about an inch long was then made over the front of the left side of

the scrotum. The free ends of the ligature transfixing the gubernaculum were then seized with Spencer Wells's forceps, which were then introduced through the incision in the external oblique, pushed along the inguinal canal, through the external ring into the right side of the scrotum. The ends of the forceps were then made to impinge against the scrotal septum. A small incision was now made on the forceps through the wound in the left side of the scrotum. The forceps carrying the ligature were pushed through to the left side and the ends of the ligature secured. The forceps were then withdrawn, and by pulling in the ligature the right testicle was drawn along the track made by the forceps along the inguinal canal through the scrotal septum to the left side of the scrotum. Both wounds were then closed.

The patient was readmitted two months later, and the left testicle was then transplanted to the right side of the scrotum by a similar operation.

No sutures were necessary for the fixation of the testicle in its new position, the contraction of the opening in the septum preventing its return and exercising a gentle continuous traction which was absent in the ordinary method of orchidopexy.

Mr. Turner showed another case of double retained testicle in which the right testicle only had been transplanted. He proposed to transplant the left testicle later.

**Seasonal Enlargement of the Parotid Glands.**—Mr. Phillip Turner also showed a boy, aged 14 years, who had had painful and tender enlargement of both parotid glands every spring and autumn for the last nine years. The other salivary glands were not affected and the boy showed no other abnormality except that he was unduly sensitive to cold.

**Case of Cleido-cranio-dysostosis in which the Removal of the Outer Part of the Imperfect Right Clavicle relieved Severe Symptoms from Pressure on the Brachial Plexus.**—Dr. F. J. Poynton and Mr. H. Morriston Davies.—This patient, a girl, aged 20 years, was reported originally by Dr. Spriggs ('Lancet,' 1907, ii, p. 1599).

In December, 1913, she was shown by Dr. Poynton at the Clinical Section for an opinion as to the best method of treatment of severe symptoms pointing to pressure on the right brachial plexus.

Her work as a dressmaker had been interfered with by severe shooting pains down the inner side of the arm and over the front of the chest. There was marked loss of power in the right hand, and much circulatory disturbance. When the shoulder was depressed the right pulse was diminished in volume, a sign which assisted in the exclusion of syringomyelia, a condition which has been described in association with this form of dysostosis.

Mr. Davies removed the outer fragment of the clavicle, and when the patient left the hospital there was already clear improvement. She had been completely free of the severe neuralgic pains, her hand had recovered power, and she had resumed her occupation. The only complaint now was of a dull ache in both shoulders, brought on by the long hours during which she sat in a position sewing over her work that tended to makes the shoulders "over-stoop." This was relieved by sitting up with the shoulders braced back, and was of an entirely different nature to the former trouble, which was caused by the inner end of the outer fragment of the right clavicle hitching under the outer end of the inner one.

**Pseudo-rachitic Achondroplasia.**—Dr. Frederick Langmead showed a female infant, aged 6 months, whom he had first seen when she was 9

weeks old. Many signs of rickets were present, but the legs were disproportionately short compared with her body, and her finger-tips, with arms extended, reached only to just below the iliac crests. The provisional diagnosis of achondroplasia had therefore been made, although the head, face, and hands had not the characteristic appearance.

**Keratosis Follicularis Spinulosa.**—Dr. J. L. Bunch showed a case in a boy, aged 4 years. The lesions had first been noticed about eighteen months previously on the neck and later on the arms, back, and abdomen. They consisted of small acuminate papules which were more perceptible to the touch than to the eye. There were no inflammatory phenomena.

**Acholuric Jaundice.**—Dr. C. O. Hawthorne showed a girl, aged 1 year and 3 months, a firstborn child, said to have been jaundiced since birth. She had jaundice, considerable enlargement of the spleen, some enlargement of the liver, no bile in the urine, and normal stools. Blood examination showed: White cells, 14,500; polymorphs, 44·8; small lymphocytes, 47·2; large mononuclears, 6·8. The blood serum contained bile pigment.

**Paramyoclonus multiplex.**—Dr. Hawthorne also showed a boy, aged 6 years, said to have been "jerky" since birth. There were frequent quick clonic contractions, most marked in the abdominal muscles, but visible also in the shoulders, upper arms, thighs, and crenaster muscles, and to some extent in the face. The contractions were bilateral, but the two sides were not always affected simultaneously. There was no history of rheumatism, chorea, or epilepsy.

## Philadelphia Pediatric Society.

October the 13th, 1914, W. N. Bradley, M.D., President.

**Unusual Rachitic Deformities.**—Dr. Theodore le Boutillier showed a coloured girl, aged 10 years, whose deformities were first noted when two years old. Now almost every bone in her body showed deformity. Her head was that of an ape; the eyes protruded markedly under her retreating forehead. Her height was much reduced owing to bowing of long bones and spinal curvature. Mentality was about that of a child of six years.

**Molluscum Contagiosum.**—Dr. Frank Crozer Knowles presented this child, an infant with a dozen lesions on the lower portion of the face and neck. Contagiousness, differential diagnosis, pathology, and treatment were briefly discussed.

**Infantile Syphilis.**—Dr. H. Lowenberg showed an infant, aged 2 months, with a ham-coloured rash confined to extremities, intense anæmia, and enlarged spleen. The blood showed 30,000 leucocytes, with increase in small lymphocytes. Mother and infant gave positive Wassermann, while father and three other children were negative. The mother showed no evidence of syphilis. The ætiology in this case remained a mystery. In spite of active treatment with neo-salvarsan and iron, eye symptoms developed.

**Palate Deformity.**—Dr. S. M. Hamill showed a baby with deformed palate and attacks of cyanosis. It took the bottle well, with very little regurgitation.

**Deformity of Hands and Feet.**—Dr. Bradley showed an infant with deformed hands and feet.

Dr. J. T. Rugh said that the deformity was most unusual in type. He had observed a series of cases in one family, in which four generations had shown club feet in every child, with club hands in some of them besides. Maternal impressions had been established anatomically by Fossetti, through the presence of nerve fibres in the cord and placenta. They were not only possible, but very probable in many cases.

Dr. Young considered this case remarkable and unique in that it exhibited both the absence of parts and the fusion of those present. The absence of parts was best explained by the Ray theory—that it was due to the arrest of the budding extremities—but the fusion was more difficult to explain, and the association was unusual.

Dr. Bradley added that it was impossible to prove maternal mental impression in this case.

**Cretinism.**—Dr. Joseph Fleitas showed a boy, aged 8 years, with cretinism and possible hyperplasia of the hypophysis. The genitalia were very markedly developed. An X-ray of the skull showed enlargement of the sella turcica. Great improvement followed the administration of thyroid.

**Spastic Diplegia.**—Dr. J. H. W. Rhein showed a family of four with spastic diplegia. Two were boys aged 14 and 10 years, and the girl was aged 8 years. A younger sister, aged 5 years, as yet showed only increased knee-jerks. Another sister died at 14, having had the disease ten years. Family history is absolutely negative. Symptoms began with spasticity in the legs, with the arms affected in about a year, followed by mental changes associated with speech disturbances. Sensory, sphincter, and eye symptoms were absent. Wassermann reaction was negative in all, as in the father.

**Osteosarcoma of Femur.**—Dr. E. E. Graham reported this case, in a boy aged 11 years, and Dr. W. F. Manges demonstrated the X-ray plates. He also referred to two similar cases, treated by the X-rays and Coley's fluid, one four and the other two years ago, with recovery. He advised similar treatment in this case.

**Dislocation of the Coccyx.**—Dr. Rugh showed this girl, aged 14 years, who fell, in May, 1913, while roller skating, striking her spine on the curb. Pain was most marked when rising after having been seated a while. Rectal examination showed the coccyx dislocated forward on the sacrum. Dr. H. A. Wilson operated in September, 1914, uncovering the sacrococcygeal articulation, removing a posterior wedge-shaped piece, and placing a mattress suture of silk, drawing the two cut surfaces together, thus tilting the coccyx downward and backward. Patient was kept in bed several weeks. Recovery was uneventful. This operation was preferable to removal of the coccyx.

**Congenital Club Foot.**—Dr. Young showed this child, with congenital club foot cured by operation, to illustrate the effect of orthopædic treatment after operation. He insisted that it was quite as important to treat these cases as it was to perform the operation, and good results could only be

obtained by combining both forms of treatment. The operation consisted of open division of the posterior tibial tendon and subcutaneous division of the anterior tibial, plantar fascia, and tendo Achillis. The operation was performed at the time the child was twelve months old, about the time it began to walk. The deformity was corrected and held in cast for three weeks; the brace was then applied and massage treatment given, also active Swedish movements for one year, special attention being paid to the peroneal or weakened muscles. A night brace was also useful in holding the foot in position all night. In answer to Dr. Graham's question Dr. Young added that the best time for this operation was about one year. Some surgeons operated before, but the tendons were so small that results were not always good. Braces might be applied before the baby was a year old.

**Congenital Elevation of the Scapula.**—Dr. J. H. Jopson showed X-rays and photographs of two cases of Sprengel's deformity. One was a boy, aged 2 years, in whom the right shoulder was affected, the condition being associated with a practical absence of the latissimus dorsi muscle and the post-axillary fold. There was little limitation of motion, and no operation was attempted. The other case, a girl, also had the right shoulder affected. The right scapula was 2¼ in. higher than the other, rotated upward and outward, the lower angle being drawn toward the spine and the vertebral border almost in contact with the spine. The vertical diameter of the right scapula was smaller than the left. Abduction of the right arm was limited; the arm could not be raised above the shoulder. The left lower extremity was more than an inch longer than the right. At operation a supernumerary bone was found to articulate with the vertebral border of the scapula at the junction of the middle and lower thirds, a real joint lined with cartilage being present. The other end of this metacarpal-shaped bone was fused with the lamina of the seventh cervical vertebra. This bone was excised, the muscles attached to the upper end of the scapula divided and sutured at a higher level. Improvement in abduction and elevation was prompt, almost to normal, with marked lessening of deformity. Dr. Jopson reviewed the theories of the causation of this congenital malformation.

Dr. W. E. Lee showed a girl who had come to the Children's Hospital for Colles' fracture. Her head was held in peculiar position, rigid, without flexion or extension, and but a few degrees of rotation. Both shoulders were elevated and fixed. The posture was typical of tuberculosis of the cervical vertebræ. Just below the very prominent seventh cervical vertebra was another bony prominence, attached to the inner edge of the left scapula at the level of the spine. This limited any movement of the left scapula. The left humerus could not be raised to more than an angle of 90 degrees with the body. X-rays showed this bony prominence to articulate with the edge of the scapula and spines of the upper dorsal vertebræ. The process was exposed by a boomerang excision. Starting along the upper edge of the scapula it passed around the bony process and ended near the angle of the scapula. Attached fibres of the latissimus dorsi were separated, and a distinct articulation was exposed between the inner end and the edge of the scapula. Further isolation of the process showed the inner end attached to the arching processes of the first dorsal vertebra. This process was apparently an elongation from the spine of the first dorsal vertebra, which articulated with the edge of the scapula. The process was disarticulated at its outer end and the spine severed with a bone-cutting forceps at its origin from the arching processes of the first dorsal vertebra.

Dr. Jopson believed that, although it might be an intra-uterine malformation, it was more probably reversion to a primitive type, the presence of the supernumerary bone in a large proportion of cases indicating its atavistic origin.

# Abstracts from Current Literature.

## Medicine.

**Diphtheria in the Metropolitan Asylums Board Hospitals** (*'M.A.B. Report,'* 1913).—5076 cases were admitted in 1913 as compared with 4844 in 1912 (*v.* British Journal of Children's Diseases, 1914, xi, *p.* 35). Exclusive of purely bacteriological cases the percentage mortality was 6·5, the lowest on record, as compared with a ratio of 30 per cent. before the introduction of antitoxin, and 2·4 per cent. below the average rate for the last ten years. Diphtheria is usually more fatal to males than females, but in 1913, out of 55 females under one year, 15 died—a percentage of 27·3, whereas out of 54 males 8 died—a percentage of 14·8. The total mortality at all ages was 6·8 per cent. for males, and 6·2 per cent. for females. On 245 cases tracheotomy, on 39 intubation, and on 24 both operations were performed, among whom there were 69, 1, and 10 deaths respectively. The percentage error in cases admitted was 15·6. Among 1009 wrongly certified as diphtheria were 699 of tonsillitis, 64 of laryngitis, 23 of rhinitis, and 140 of broncho-pneumonia, 25 had no obvious disease or were not diagnosed. Paralysis occurred in 7·85 per cent., albuminuria in 23·28 per cent., otitis in 4·10 per cent., serum rashes in 31·24 per cent., joint pains in 3·16 per cent., and abscesses at the injection site in 0·72 per cent. 141 or 2·86 per cent. contracted scarlet fever, 36 or 0·73 per cent. measles, and 18 or 0·36 per cent. whooping-cough. J. D. Rolleston.

**On diphtheria** (*'Semana Med.,'* 1914, xxi, *p.* 183).—**Cabrera** gives a lengthy account of his observations from nearly 3000 cases of diphtheria. The article contains nothing unfamiliar. In 80 per cent. of cases the bacteriological and clinical diagnosis were in accord. The clinical symptoms are a better guide in prognosis than the bacteriological findings. Inoculation should be always undertaken in preference to tracheotomy. Serum should be injected on the clinical evidence without waiting for the laboratory report. He prefers von Behring's serum and his maximum initial dose is 3000 units. The large doses of serum which have been recommended in paralysis have proved useless in his hands. M. D. Eder.

**Diphtheria in an infant, aged 15 days** (*'Semana Med.,'* 1914, xxi, *p.* 799).—**Amante** and **Pepa** report the case because diphtheria is rare under three months; in their ten years' experience at the Children's Hospital at Buenos Ayres this is the youngest child attacked. The clinical and bacteriological examination left no doubt as to the diagnosis. The secretions from the nose, eyes, and the throat showed Löffler's bacillus. The condition was bad and the child unable to suck. 1500 units of Behring's serum were injected immediately, when seen on the second or third day of the illness. Death took place the next day. M. D. Eder.

**Diphtheria bacillus carriers** (*'Monatsschr. f. Kinderheilk.,'*) 1914, XIII, *p.* 113).—**G. van't Hoff** examined the throats of a large number of children after their discharge from the Diphtheria Block at the Charité in Berlin. He found that diphtheria bacilli were almost always present in cases that had been discharged less than five months previously. In many children the bacilli were still present seven months after discharge, and in some cases a few bacilli were found after eight, nine, or even ten months. Sometimes the first or second examination was negative, probably owing to incomplete evacuation of the tonsillar lacunæ in which the bacilli persist longest, while later cultures proved positive. J. D. ROLLESTON.

**Scarlet fever in the Metropolitan Asylums Board Hospitals** (*'M. A. B. Report,'* 1913).—15,010 cases were admitted in 1913 as compared with 9883 in 1912 (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1914, XI, *p.* 36). The mortality was 1·25 per cent. The percentage error of diagnosis was 6·0. Among the 963 wrongly certified as scarlet fever were 78 of German measles, 31 of chickenpox, 226 of tonsillitis, and 241 of erythema; 160 had no obvious disease or were not diagnosed. The commonest complications were otitis (8·43 per cent.), albuminuria (7·89 per cent.), secondary adenitis (4·74 per cent.), rheumatism (2·85 per cent.), and nephritis (2·18 per cent.); 261 or 1·82 per cent. had relapses, 195 or 1·36 per cent. contracted diphtheria, 212 or 1·48 per cent. varicella, and 118 or 0·82 measles.

J. D. ROLLESTON.

**Some observations on the last epidemic of scarlet fever in Warsaw** (*'Wien. klin. Rundschau,'* 1914, XXVIII, *p.* 13).—**Nisenson** regards the continuance of scarlet fever during the last few years in Warsaw as due to the mistrust of the public in the hospitals, the insufficiency of free beds, and the difficulty in the admission of young children. The severe cases he treats by serum which he injects as soon as possible. He has used the sera of Palmirski, Moser (antistreptococcic), and Tavel (polymorphic). At the same time camphor and milk are injected. In nasal complications no syringing should be allowed; he finds a serum gives the best results. One should not be content to disinfect the home once only with formaline.

M. D. EDER.

**Attempts to produce scarlet fever in monkeys** (*'Arch. of Int. Med.,'* 1914, XIII, *p.* 909).—**C. Krumwiede, jun., J. M. Nicholl, jun.,** and **J. S. Pratt** refer to the experiments of Cantacuzène (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1911, VIII, *p.* 230), Levaditi, and others (*ibid.*, 1912, IX, *p.* 520), and record their own results with monkeys and dog-faced baboons. Faucial inoculation of streptococcus cultures on unfiltered exudates and discharges from scarlet fever cases, as well as intra-peritoneal injections of infiltrates of such exudates and discharges and of large quantities of blood, gave negative results. J. D. ROLLESTON.

**The peritoneal complications of scarlet fever** (*'Bull. de l'Acad. de Méd.,'* 1914, LXXI, *p.* 748).—**P. Teissier** alludes to the case recently reported by Touraine and Fenestre (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, VII, *p.* 465), and records five personal cases. Two occurred in children, aged 7 months and 6 years, who died during the eruptive period, and one in a child, aged 15 years, who died during desquamation. The other two were cases of suppurative streptococcal peritonitis, which occurred during the first

week of the disease. One of these was a girl, aged 12 years, with gangrenous streptococcal angina, and the other was a woman, aged 28 years, without any pelvic lesions. The pathogeny of scarlatinal peritonitis is that of the other complications of scarlet fever; the action of the scarlatinal virus is possible, though not demonstrated, while the action of the habitual agent of secondary infection, the streptococcus, is certain. J. D. Rolleston.

**Cardio-vascular troubles in scarlet fever** (*'Paris méd.,'* 1913–14, II, *p.* 165).—**Nobécourt** and **Milhit** discuss the subject as follows: (1) Endocarditis and pericarditis. Endocarditis in scarlet fever is much rarer than was once supposed, occurring in only 0·58 per cent. of cases. It is often latent. It may be an early or late phenomenon. It is rare for it to be fatal or to clear up entirely; more frequently it becomes chronic. Pericarditis may be present alone or in association with endocarditis. It may be dry or accompanied by a sero-fibrinous or purulent effusion. As a rule it is latent and rapidly subsides, but in purulent cases it is almost always fatal. Both endo- and pericarditis are usually due to secondary infection. (2) Functional disturbances of the myocardium. These are not always the result of definite anatomical lesions. Scarlatinal myocarditis is rarely found post mortem. Tachycardia, even in normal cases, is present from the onset and is relatively constant. The pulse frequently exceeds 120, even in mild cases. In cases that are severe from the start the pulse may reach 180 or even 200. Bradycardia, recently described by Monier-Vinard and Meaux-Saint-Marc (*vide* British Journal of Children's Diseases, 1914, XI, *p.* 317), is occasionally met with. Disturbances of rhythm (sinus arrhythmia), which is very common in children, is often exaggerated in convalescence. Extra-systoles, which are less frequent in children than in adults, are due either to hypertension associated with scarlatinal nephritis or to a myocardial lesion. A myocardial syndrome characterised by cyanosis, dyspnœa, scanty and albuminous urine, and other signs of heart-failure may occur. Cases of sudden death have been recorded by Gouget and Dechaux (*vide* British Journal of Children's Diseases, 1909, VI, *p.* 512), Weill and Mouriquand (*ibid.*, 1912, IX, *p.* 34), and others. In some cases the histological lesions of the myocardium are slight or absent, and lesions are found in the suprarenals (*ibid.*, 1910, VII, *p.* 410, and 1914, XI, *p.* 276). (3) Cardiac disturbance in scarlatinal nephritis. Early dilatation of the heart and enlargement of the liver may occur in scarlatinal nephritis, and the clinical picture may more closely resemble cardiac than renal disease. Gallop rhythm is almost constant in scarlatinal nephritis. (4) Cardiac sequelæ of scarlet fever. Scarlatinal endocarditis may become chronic, though not so frequently as was once thought. The most frequent lesion is mitral regurgitation; more rarely there is mitral stenosis or aortic regurgitation. In very rare cases embolism of cardiac origin may cause hemiplegia. As the result of functional disturbances, the myocardium is often left specially susceptible so that it is readily dilated by various causes.
J. D. Rolleston.

**Meningeal conditions in scarlet fever and scarlatinal uræmia** (*'Ann. de Méd. et Chir. inf.,'* 1914, XVIII, *p.* 475).—**Mauriac** and **Philip.**—A boy, aged $8\frac{1}{2}$ years, who had had scarlatina a month previously, was suddenly taken with vomiting and epileptiform movements of the left side. The urine contained a large amount of albumin, and the blood and cerebro-spinal fluid a great excess of urea. Coma and fever supervened, the second lumbar

puncture showed a pneumococcal meningitis without definite symptoms, and death took place. A girl, aged 16 years, had a mild attack of scarlet fever without albuminuria, and seemed quite convalescent when, after exposure to cold, sudden dyspnœa came on with cyanosis and rapid pulse. The urine showed a large amount of albumin with blood-cells and casts. There was œdema of the lungs. The child died in three days. The authors discuss the possibility of a latent scarlatinal meningitis.

J. Porter Parkinson.

**The isolation of scarlet fever** (*'Edinburgh Med. Journ.,'* 1914, xii, *p.* 214).—**W. Robertson.**—For the last three years all cases of scarlet fever at the Leith Isolation Hospital have been discharged after thirty to thirty-five days' detention. Desquamation of the soles was no objection to discharge if the patient had been in hospital four weeks. The return case rate during this period of three years remained low, ranging from 1·7 to 2·8 per cent.

J. D. Rolleston.

**Return cases of scarlet fever** (*'Monatsschr. f. Kinderheilk.,'* 1914, xii, *p.* 673).—**W. Knöpfelmacher** and **R. Hahn.**—According to previous observers, the return case rate has ranged from 3·6 per cent. to 6·5 per cent. During the triennium 1910–12 the return case rate at the Caroline Children's Hospital in Vienna has been 5·5 per cent., 7 per cent., and 10·3 per cent. respectively. The children were almost always kept six weeks in hospital. In only one of the primary cases had there been rhinorrhœa on leaving hospital. The ear and throat in each case had always been normal on discharge. The great majority of the return cases occurred within the first fortnight of the discharge of the primary case. No relation existed between the character of the primary and that of the return cases. The return cases might have had a wider and decidedly severer attack than the primary. It is most probable that the primary case is infectious owing to its naso-pharynx and buccal cavity being loaded with the virus of its own scarlet fever, or more frequently that of its neighbours, especially those recently admitted. The present method of isolating scarlet fever is therefore unsuitable. Lesage's plan of individual isolation for the first twenty days is too expensive and irksome, but the writers recommend that the convalescent should be separated from the acute cases.

J. D. Rolleston.

**Measles in the Metropolitan Asylums Board Hospitals** (*'M. A. B. Report,'* 1913).—3400 cases were admitted in 1913 as compared with 4314 in 1912 (*vide* British Journal of Children's Diseases, 1914, xi, *p.* 38). The relatively high mortality (12·6 per cent.) was due to the fact that admissions were limited to children of the poorest classes or to urgent and necessitous cases recommended by the medical officers of health. As in 1912, the mortality was higher in males than in females. Among 203 wrongly certified as measles were 74 of German measles, 36 of erythema, and 21 with no obvious disease. The commonest complications were broncho-pneumonia (16·22 per cent.), otitis (15·99 per cent.), enteritis (3·31 per cent.), and conjunctivitis (2·94 per cent.); 85 or 2·10 per cent. contracted diphtheria, 83 or 2·07 per cent. whooping-cough, and 80 or 1·98 per cent. scarlet fever.

J. D. Rolleston.

**Generalised subcutaneous emphysema in uncomplicated measles** (*'Bull. et Mém. Soc. Méd. Hôp. de Paris,'* 1914, xxxviii, *p.* 39).—**H. Méry**

and **L. Girard** record two personal cases in children, aged 6 and 7 years, with three others from literature in patients, aged 7, 12, and 18 years respectively. In every case the cough was more severe than in ordinary measles, but none had broncho-pneumonia, with which subcutaneous emphysema in measles is usually associated. The only functional symptom was a certain degree of dyspnœa. The emphysema reached its height in three or four days, and then disappeared entirely. All recovered. Two theories have been advanced to explain this form of emphysema. (1) According to the laryngeal theory, ulceration of the mucosa of the ventricle of the larynx takes place, and the violent cough forces the air through the laryngeal fissure into the perilaryngeal, mediastinal, cervical, and facial tissues. (2) According to the mediastinal theory, the alveoli or bronchi give way, and the air, driven by the cough, passes into the perilobar tissues and hence into the mediastinum, neck, and face. **M. Bacqué** (*'Thèses de Paris,'* 1913–14, No. 345), in a thesis inspired by Méry, discusses the subject in a similar manner.

J. D. Rolleston.

**Rubella** (*'Zeitschr. f. Kinderheilk.,'* 1914, x, *Orig., p.* 54).—**H. Saito** studied 105 cases in an epidemic of rubella among Japanese children at Port Arthur and came to the following conclusions: (1) The incubation period varies from fifteen to twenty-three days. (2) A rise of temperature above 100° F. is not uncommon, both in the prodromal period and in the eruptive stages. It does not last longer than three days and usually rapidly falls within two. (3) A papular eruption surrounded by a definitely anæmic areola is fairly characteristic of rubella. (4) Enlargement of the glands is an almost constant symptom, and enlargement of the spleen is not uncommon. (5) A transient positive diazo-reaction, indicanuria an albuminuria may occur. (6) Slight diminution in the hæmoglobin content of the blood as the eruption fades, increase in the number of neutrophiles, and a diminution of leucocytes at the height of the eruption occur. Eosinophilia is frequent, especially when the eruption is fading. (7) A tuberculin cutaneous reaction that has almost disappeared may become distinct again at the height of the eruption.

J. D. Rolleston.

**German measles: an experimental study** (*'Arch. of Int. Med.,'* 1914, xiii, *p.* 913).—**A. F. Hess,** during an epidemic of rubella in an infant asylum, examined the blood bacteriologically in four cases. In three the rash had been present for less than twenty-four hours, and in one it had been present for thirty-six hours. No growth was obtained in any case. Four *Macacus rhesus* monkeys were inoculated by intra-peritoneal injections of 3 to 8 c.c. of blood obtained from different cases. In none did a rash occur, and in only one was there a rise of temperature. Examination of the blood of several of the children exposed to infection showed that in almost every case there was a definite increase in the lymphocytes before the appearance of the eruption. Hess thinks that this premonitory lymphocytosis may help to separate infected from non-infected children, and so limit the spread of an epidemic. The lymphocytosis at the time of appearance of the rash will also help to distinguish rubella from scarlet fever, which is associated with an increase of polynuclear cells in its early stages (*cf.* British Journal of Children's Diseases, 1909, vi, *p.* 280).

J. D. Rolleston.

**Vaccinal allergy in the eruptive fevers** (*'Thèses de Paris,'* 1913–14, *No.* 347).—**Mlle. S. Stock.**—The writer's observations confirm those of

Netter (*v.* British Journal of Children's Diseases, 1913, x, *p.* 543). In measles vaccinal anergy is the rule. It is present the day before the eruption, persists throughout the eruption, and disappears on the fourth day. Vaccinal anergy in measles has a great diagnostic value, for in affections simulating measles the disappearance of allergy is very inconstant. In rubella vaccinal anergy never occurs. The prognostic value of vaccinal anergy is not less than its diagnostic value, for the disappearance of vaccinal allergy shows that the organism has lost its means of defence against infection. J. D. Rolleston.

**Whooping-cough in the Metropolitan Asylums Board Hospitals** (*'M.A.B. Report,'* 1913).—1044 cases were admitted in 1913 as compared with 1731 in 1912 (*v.* British Journal of Children's Diseases, 1914, xi, *p.* 38). Only poor children were admissible. The mortality was 13·1 per cent. Among 55 wrongly certified as whooping-cough were 22 cases of bronchitis, 5 of broncho-pneumonia, and 15 with no obvious disease. The commonest complications were broncho-pneumonia (16·20 per cent.), otitis (8·85 per cent.), convulsions (2·96 per cent.), stomatitis (1·64 per cent.), and albuminuria (0·91 per cent.). 72 cases or 6·54 per cent. contracted measles, 30 or 2·73 per cent. scarlet fever, and 16 or 1·45 per cent. chicken-pox. J. D. Rolleston.

**The ætiology of pertussis** (*'Arch. of Ped.,'* 1914, xxxi, *p.* 567).—**A. W. Williams.**—The specific ætiological factor in pertussis is not yet fully established for the following reasons: (1) The Bordet-Gengou bacillus, though present under the best and most favourable conditions as in well-to-do families or in special hospitals, is not found in the majority of cases. Mixed infection plays an important part in pertussis, very few cases remaining uncomplicated throughout the disease, so that unless it is present in very great numbers, this bacillus is very easily overgrown by other bacteria and is very difficult to isolate. (2) The complement-fixation test with the serum of human beings who have, or have had, pertussis, is not so uniformly positive as Bordet and others claim. (3) A specific lesion in pertussis has not been established, though Mallory claims that the presence of a certain number of bacilli between the epithelial cells of the trachea and bronchi constitute such a lesion. J. D. Rolleston.

**Clinical and sociological aspects of whooping-cough** (*'Arch. of Ped.,'* 1914, xxxi, *p.* 572).—**J. L. Morse** states that whooping-cough is a most serious and fatal disease. In 1906 in a registration area comprising somewhat less than half the population of the United States, 6324 children died of it. Ninety-five per cent. of the deaths occurred during the first five years, and the great majority during the first two years of life. Morse recommends that pertussis should be made notifiable, and the same penalties be imposed for failure to report it as in the case of other notifiable diseases. The sputum and vomit should be treated as in pulmonary tuberculosis. Children under five years should be separated from the patient, who should be sent to a special hospital if necessary. Quarantine should be enforced until after cessation of the paroxysmal cough, and in any case until six weeks after the onset. As the vitality of the Bordet-Gengou bacillus outside the body is very slight, formal disinfection is unnecessary. Thorough cleaning and airing of the premises is sufficient. The lymphocytosis which occurs during the catarrhal and paroxysmal stages is of considerable diagnostic value. J. D. Rolleston.

**Meningocele, a rare complication of whooping-cough** (*'Monatsschr. f. Kinderheilk.,'* 1914, XIII, *p.* 139).—**R. Weigert.**—An infant, aged 4 months, contracted whooping-cough. The attack was not very severe, but a meningocele developed at the site of the anterior fontanelle during the paroxysmal stage. There were no convulsions either during whooping-cough or subsequently, and pressure on the tumour produced no effect. The fontanelle gradually became smaller and pushed the tumour back, but at the age of 2 years and 10 months it still admitted the tips of the fingers, and the formation of the tumour could be felt. The delay in the closure of the fontanelle was doubtless due to the meningocele, as no signs of rickets were present. J. D. ROLLESTON.

**Diagnosis of whooping-cough by the complement-deviation test** (*'Journ. Amer. Med. Assoc.,'* 1914, LXII, *p.* 1008).—**A. Friedlander** and **E. A. Wagner** have tried the complement-deviation test in a limited number of cases of whooping-cough. Their method was as follows: A small amount of blood was drawn into a small test-tube or a Wright capillary tube. This was kept at room temperature or in the incubator until coagulation had taken place. The serum was then separated by the centrifuge, and two drops were used in each test. Hæmolytic system: The Noguchi system was used, because of its delicacy and the small amount of material, especially serum, required. Antigen: A pure culture of the Bordet-Gengou bacillus was obtained, and sub-cultures were made on Bordet's medium, ascitic fluid, agar and broth serum. The antigen was made from 72-hour growths in ascitic fluid agar by washing off the colonies with sterile salt water. An emulsion was made, and the bacteria again washed in salt water. From this a standard suspension was made, and ·1 c.c. and ·2 c.c. of this used in the test. Controls: In each test known normal and known positive controls were used. In each series of tests the hæmolytic system was tried out in the usual manner, using a water-bath at 37° C. for incubation. After primary incubation for half an hour, the amount of amboceptor indicated by the preliminary test was added to the final test-tube, and the tubes were again incubated in the water-bath. Final readings were taken within the following hour. Their results showed:

| | No. | Positive. | Negative. | Percentage. |
|---|---|---|---|---|
| Cases whooping | 18 | 18 | 0 | 100 |
| Normals | 8 | 0 | 8 | 100 |
| Early cases (catarrhal stage) | 3 | 2 | 1 | 66·6 |
| Not whooping, but course otherwise typical | 1 | 1 | 0 | 100 |

Nine of the positive cases were in the first week of the whoop, and three early in the second week. In no case was there a positive reaction when the patient had not had either a pertussis infection or a history of pertussis within four years. The one case in the catarrhal stage which did not give a positive reaction was tested at the very beginning of the cough. The two other cases both developed typical whooping-cough. T. R. WHIPHAM.

**Prognosis of whooping-cough in hospital** (*'Thèses de Paris,'* 1913–14, *No.* 387).—**A. Schlemmer.**—During a period of three years' observation (1912–14) at the Hôpital Bretonneau, out of 259 cases of whooping-cough, 76 died, a mortality of 29 per cent.; 68 of these deaths were due to broncho-pneumonia and the rest to measles. In the Hôpital Hérold, where individual isolation is practised, the mortality ranged from 18 to 25 per

cent. The high mortality of whooping-cough in hospital is attributed to the children being admitted too late, as 92 per cent. recover of those who have been treated in hospital from the beginning of their attack (*cf.* British Journal of Children's Diseases, 1907, iv, *p.* 454).

J. D. Rolleston.

**Typhoid fever in early life** (*'New York Med. Journ.,'* 1914, c, *p.* 205). —**J. P. C. Griffith.**—(1) In infancy the onset on an average lasts three to four days. Vomiting is an early symptom; diarrhœa is more frequent than constipation. After the attack has reached its height there is not much loss of appetite, abdominal distension is frequent, epistaxis rare; nervous depression is rare, excitation common. The temperature may rise to 103° or 105° F. and remain so for a week or more; in other cases it is very irregular. The final fall may be by crisis, and at any rate is always quicker than in adults. The duration of the attack is three weeks or less. (2) In early childhood (two to six years). The attack is milder as a rule than in adults; the onset is not so sudden as in infancy, but is often abrupt, and may be ushered in by convulsions. In the eruptive stage nervous symptoms are little marked; diarrhœa is less frequent than in infancy or later childhood. The duration is about two to three weeks. (3) Later childhood: The disease approaches the adult type, especially after the age of ten years. The symptoms of the typhoid state are more likely to develop, but not to the extent seen in the adult. Complications: Bronchitis is common, laryngitis not infrequent; epistaxis and hæmorrhage from the bowel rare. Relapse is perhaps more frequent than in the adult. The prognosis is good on the whole. The treatment is the same in any age, due consideration being given to the kind of food administered.

F. R. B. Atkinson.

**Typhoid fever with regular course in an infant, aged 7 months** (*'Le Nourrisson,'* 1914, ii, *p.* 156).—**M. Péhu** and **A. Favre-Gilly** record a case in a recently weaned infant, where the source of infection could not be determined. The temperature chart was absolutely typical, rose-spots were remarkably abundant, the spleen was enlarged, there was a moderate degree of diarrhœa, and Widal's reaction was positive in 1 in 100. No complications occurred. The case is of interest, as Maignou (*v.* British Journal of Children's Diseases, 1914, xi, *p.* 321) has recently stated that typhoid in the infant is usually atypical.

J. D. Rolleston.

**Acute typhoidal inflammation of the gall-bladder in childhood** (*'Prag. med. Woch.,'* 1914, xxxix, *p.* 279).—**Bittner** describes three cases of acute inflammation of the gall-bladder in typhoid seen in children. It is a rare and very dangerous complication, usually occurring in the third or fourth week of the illness. The clinical symptoms were rise of temperature, vomiting, abdominal pain localised over the gall-bladder region and swelling of the gall-bladder, which in one case was very marked. If the symptoms do not promptly abate an operation is called for. In two cases the result was successful; the third case was a child brought in with perforating peritonitis; at the operation the pus was found to be yellow, not fæculent, and a severe gangrenous, ulcerating cholecystitis was present; the child died a few hours later.

M. D. Eder.

**Prognosis of typhoid fever in children in the Paris hospitals** (*'Thèses de Paris,'* 1913–14, *No.* 430).—**G. Andréoli.**—This thesis is based

on the study of 1295 cases drawn from 10 different services in the Paris hospitals. The mortality was 6·14 per cent, the lowest mortality occurred between five and eight years of age, and the highest between eleven and fourteen. Complications occurred in 10·6 per cent., affecting the digestive, respiratory, and circulatory systems in order of frequency. The prognosis of meningeal symptoms varies according as they indicate merely a meningeal reaction or a true typhoid meningitis, and is determined by lumbar puncture.

J. D. Rolleston.

**Paratyphoid fever in children** (*'Gaz. internaz. di med., chir., etc.,'* 1914, *p.* 457).—**L. Sironi** records cases in a boy, aged $2\frac{1}{2}$ years, and a girl, aged 9 years. In both the serum test was positive; the blood culture was positive in the boy and negative in the girl. In both the spleen remained of normal size, though their livers became considerably enlarged. Both recovered. The remarkable features of the boy's case were (1) the appearance of well-marked meningeal symptoms with a normal cerebro-spinal fluid; (2) a generalised macular eruption on the eleventh day. The girl had three slight attacks of intestinal hæmorrhage.

J. D. Rolleston.

**Tetanus inoculated by the felt employed in the correction of scoliosis by Abbott's method** (*'Arch. de Méd. des Enf.,'* 1914, xvii, *p.* 601).—**A. Broca** and **M. Houdré** allude to two fatal cases reported by Kirmisson to the Académie de Médecine on June 2, 1914, in which the excoriations produced by the felt of the plastic jackets had been infected by tetanus bacilli, and record a personal case in a girl, aged 13 years. Abbott's plaster jacket was applied on March 17, and pieces of felt were introduced at regular intervals, the last piece being inserted on May 12. On May 20 the child was admitted to hospital with tetanus fully developed. On removal of the jacket a slough was found on the right shoulder caused by the pressure of the felt. Death took place next day. J. D. Rolleston.

**A contribution to the study of the rheumatic infection** (*'Practitioner,'* 1914, xciii, *p.* 445).—**F. J. Poynton, C. D. S. Agassiz,** and **J. Taylor.**—An analysis based on 350 fatal cases, 155 of whom were males and 195 females, shows the following results: Males under twelve 101, males over twelve 54; females under twelve 149, females over twelve 146. Heredity 26 per cent. Age incidence: Rheumatism is at its worst from the sixth to the twelfth year, and by far the majority of deaths occur before the twentieth year. In 100 consecutive cases over half had had an attack before puberty; 24 per cent. died in the first attack under twelve years of age; in those over twelve only 3 per cent. The infection reaches the pericardium by the blood capillaries and the changes begin within the pericardium, which was affected in 215 cases of 250 under twelve years of age (86 per cent.); the friction sound could be heard in 80 per cent. Of 250 cases the mitral valve was damaged in 247, the aortic in 102, the tricuspid in 78, and the pulmonary in 6. Thirty cases suffered from malignant endocarditis, 14 others were under twenty years of age, the most frequent combination being disease of the mitral and aortic valves. In only three cases of 250 was death due to myocardial failure with no valvular change. Pleurisy and mediastinitis were present in 50 per cent., peritonitis in 5 cases.

F. R. B. Atkinson.

**Obscure manifestations of rheumatism in childhood** (*'Arch. of Ped.*, 1914, xxxi, *p.* 13).—**J. A. Colliver,** examining 1000 Californian boys of the age of puberty, found evidence of rheumatism in 5·2 per cent. He regards this figure as probably too low, owing to the difficulty in the early detection of the disease. He emphasises that the onset of the infection in children is slow, insidious, but progressive. Amongst well-known early signs of the disease he describes a cutaneous manifestation which he has found in the early stages of the infection, and which, in its pre-desquamative stage, has not been previously described. The condition consists of crops of a pin-point eruption, appearing usually on the palmar surfaces of the hands or feet, affecting chiefly the toes and the tips of the fingers. The appearance of these spots is accompanied by itching. Later minute white papules appear, which develop into blisters and finally desquamate.

Reginald Miller.

**Still's disease** (*'Birmingham Med. Rev.,'* 1914, lxxv, *p.* 83).—**O. Holden** publishes a thoroughly studied example of this malady in a boy, aged 5 years, in whom arthritic symptoms had been present for eighteen months. Several points of interest are noted. Carious teeth were present. A mild leucocytosis (18,000 to 20,000) was observed with a proportionate increase in lymphocytes. This blood picture, although common in the disease, is not usually given in descriptions of it. In addition, an apical presystolic bruit was heard. Treatment by means of thyroid extract, anti-syphilitic remedies, iron and arsenic, and finally ileo-sigmoidostomy produced no improvement in the condition of the joints. Good illustrations are given. The author, from consideration of the skiagrams of the joints of the patient, states that there is no relationship between Still's disease and rheumatoid arthritis, without defining the condition he alludes to under the latter term.

Reginald Miller.

**Still's disease and arthritis deformans** (*'Arch. of Ped.,'* 1914, xxxi, *p.* 414).—**J. B. Manning** and **F. J. Fassett** accept the view that Still's disease is a form of infective arthritis, and that in it bony changes are of later development than arthritic and peri-arthritic changes. They report a case in which the source of infection appeared to lie in periodontal suppuration.

Reginald Miller.

## Dermatology and Syphilis.

**Diphtheria of the skin** (*'Journ. Amer. Med. Assoc.,'* 1914, lxiii, *p.* 398).—**F. C. Knowles** and **L. D. Frescoln** state that diphtheria of the skin may occur in several forms, in addition to the false-membrane type, the ulcerative, gangrenous, eczematous, impetiginous eczema-like, pustular, impetiginous, ecthymatous, vesicular (varicella-like), bullous, dermatitis herpetiformis-like, tumours and abscesses. Two cases of the bullous impetigo type are reported. (1) A girl, aged 4 years, had always been healthy. Three days before she came under observation the outbreak appeared on the body, with an accompanying sore throat. There were observed on the trunk, the extremities, and the buttocks two dozen pustular and bullous lesions varying from a pea to a pigeon's egg in size. The lesions were discrete and of a whitish-yellow to an orange-yellow colour. The large bullous lesions had an inflammatory areola, and on rupture were found to be multilocular and filled with a thick, cheese-like yellow pus. The throat was swollen, the glands of the neck enlarged, the patient restless, and there was a high temperature. Examina-

tion showed membranous white patches on both tonsils. Cultures were made from an unruptured lesion on the lower abdomen and also from the throat. Diphtheria bacilli were obtained from each location, the one of type D and the other of type C, according to Westbrook's classification. Staphylococci were also found in the cultures. The patient was given 3000 units of antitoxin and was sent to hospital. Death ensued two days later. (2) A sister of patient 1, aged 8 years, who had been unusually free from sickness, developed, the day previous, sore throat and an eruption of the skin. The right tonsil was covered by a white membrane. The temperature was moderately high. Scattered over the trunk and the extremities were about a dozen lesions, mostly the size of a pea, but a few with the proportions of a hazelnut. They were of the same character as her sister's; the inflammatory areola, however, was less marked and the contents were of a thinner consistency. Cultures were made from the tonsil and from an unruptured lesion on the leg. Diphtheria bacilli were found in each, corresponding to the C type of Westbrook. Staphylococci were also found. The patient was given 1250 units of antitoxin and was transferred to hospital. Although the patient developed scarlet fever while in the hospital, she finally recovered.

T. R. WHIPHAM.

**A case of multiple gangrene in a child, aged 6 years** (*'Austral. Med. Journ.,'* 1914, I, *p.* 61).—**J. A. Smeal.**—The boy suddenly developed purpuric spots on the arms and knees, ears and cheeks. Left lobar pneumonia ensued, and, after this had cleared up, gangrene of the feet set in and spread rapidly to the legs. Nearly two months after the right leg was amputated below the knee-joint and a week later the left leg at a similar spot. Recovery took place.

F. R. B. ATKINSON.

**Pellagra in early childhood** (*'Am. Journ. Dis. Child.,'* 1914, VII, *p.* 124).—**W. Weston.**—Ætiology: It may occur at any age from a few weeks, but is not frequent under three to four months. It affects both sexes equally. No climate or country is exempt. Most of the attacks occur in spring, early summer, or autumn. The sun aggravates the rash. It is usually found amidst insanitary surroundings. The cause is unsettled; some consider maize as the cause, others believe it is conveyed by a simulium. Symptoms: These are well known and need no description. Diagnosis: A child with red tongue, fissured lips, diarrhœa, headache, insomnia, paræsthesia, and brisk or absent knee-jerks should suggest pellagra. The rash may develop later. Prognosis: The younger the infant, the less favourable the outlook. Treatment: Nurslings should be weaned from pellagrous mothers. Change of diet and environment is advisable. Hydrotherapy ranks high; local remedies and tonics are valuable, especially iron and arsenic.

F. R. B. ATKINSON.

**The causes and treatment of eczema in infancy and childhood** (*'Arch. of Ped.,'* 1914, XXXI, *p.* 735).—**R. G. Freeman.**—Apart from external irritation, the disease is usually due to gastro-enteric derangement. The food should be cut down to caloric requirements, and stewed fruits and cream forbidden. The parts affected should be constantly covered with non-irritative applications.

F. R. B. ATKINSON.

**Epidemic alopecia areata** (*'Brit. Journ. Derm.,'* 1914, XXVI, *p.* 207).—**Haldin Davis** describes an epidemic of 174 cases of alopecia areata in an

orphanage. With the exception of two foster-mothers and a servant-girl aged 17 years, all the patients were girls under twelve years. The patches were much more like ringworm than ordinary alopecia areata to the naked eye, but no fungus could be found in the affected hairs nor in scrapings from the scalp. The patches were not entirely bald, as in alopecia areata, even in the centre, but were covered by stumps broken off very close to the surface, which did not come out easily, as in alopecia areata, nor break easily, as in ringworm, but required the application of considerable force. Microscopically they were swollen at the free end, not cut sharply across, and within the hair at the site of fracture was an opaque mass, the nature of which could not be determined. Rapid recovery followed daily washing of the scalp and painting the patches with liniment of iodine. The epidemic was probably due to some organism, but its nature could not be ascertained. J. D. Rolleston.

**Comparison of results of the luetin reaction and the reaction of Wassermann in hereditary syphilis** (*'Ann. de Méd. et Chir. inf.,'* 1914, xviii, *p.* 465).—**Blechmann, Delort,** and **Tulasne** state that the intradermal reaction of Noguchi is difficult to practise in children's consultations owing to its complexity, and the significance of its reaction can only be established by a series of observations. Negative reactions have no significance; also the activity of luetin is not constant. According to statistics the reaction is obtained in 70 per cent. of syphilitic cases. In some cases where Wassermann is negative, Noguchi's reaction has been positive. The reaction is often not very definite, and may be due to hypersensibility of the skin in the child. It is often negative in cases of hereditary syphilis which have been vigorously treated, while the Wassermann still continues to be positive. To sum up, the writers consider Noguchi's reaction much inferior to that of Wassermann. J. Porter Parkinson.

**General atrophy in heredo-syphilis without apparent syphilitic lesions** (*'Thèses de Paris,'* 1913–14, *No.* 369).—**V. Dragoesco** records 18 cases, 14 of which are personal, of heredo-syphilitic infants whose only symptom during life was a progressive atrophy. Under mercurial treatment 12 recovered and 6 died. Out of 5 on whom an autopsy was held, 2 showed specific lesions in the viscera, and in 3 no such changes were found (*cf.* British Journal of Children's Diseases, 1910, vii, *p.* 414).
J. D. Rolleston.

**A case of syphilitic arthritis** (*'Brazil Medico,'* 1914, xxviii, *p.* 173).—**Barbosa** saw a child with swelling of the right wrist and sinuses on the dorsal surface. There was no inflammation, and the general condition was good. The pus was sterile. An arthrotomy was carried out, and the wound soon healed, but the joint continued swelling. Signs of syphilis were noticed; after anti-syphilitic treatment the wrist became of normal size with good movements. But the lower part of the ulna was extremely painful; a resection of a segment of the shaft was made which gave a good result. There are two skiagrams of the joint. M. D. Eder.

**A study of hereditary lues of the nervous system (Friedreich's symptom complex)** (*'Jahrb. f. Kinderheilk.,'* 1914, lxxix, *p.* 519).—**A. Spiecker** describes the history of a family, the father and mother of whom gave a negative Wassermann. The first and fourth child were apparently healthy, while the second and third showed marked signs of Friedreich's ataxia. He considers from this, as well as from a study of some

of the literature, that hereditary lues can produce a disease very similar to hereditary ataxia; but it is doubtful whether it is a true Friedreich's disease.

F. R. B. Atkinson.

**A case of general paralysis in a boy, aged 10 years** (*'Jahrb. f. Kinderheilk.,'* 1914, lxxix, *p.* 24).—**A. Collett** describes a case of this disease which began at the age of seven. The child suffered from hereditary syphilis. The post-mortem appearances are described in detail and a general *resumé* of the affection given.

F. R. B. Atkinson.

**A case of juvenile general paralysis of the insane** (*'Austral. Med. Journ.,'* 1914, iii, *p.* 1567).—**W. L. T. Lind.**—The patient was a boy, aged 14 years at death, and the post-mortem examination revealed all the changes associated with this disease.

F. R. B. Atkinson.

**Juvenile paresis treated by the intra-spinal injection of salvarsanized serum** (*'Journ. Amer. Med. Assoc.,'* 1914, lxii, *p.* 1888).—**C. E. Riggs.**—A boy, aged 8½ years, was the second child in a family of five, the first having been still-born. The father contracted lues at seventeen, and according to his statement infected his wife. The blood-serum in his case gave a positive reaction, while his wife, on the other hand, presented a negative Wassermann in both blood-serum and spinal fluid. The pressure of the latter was increased. Both the Noguchi and the Nonne tests were negative, as was the Lange colloidal gold reaction. There were twenty-six lymphocytes to the cubic millimetre. Physicians who had seen this woman at the time of her supposed infection were of opinion that it was luetic. The blood-serum in two younger children, aged 5½ years and 5 months, respectively, reacted negatively, while a third, aged 2½ years, gave a positive Wassermann in the blood-serum. The entire family, aside from the patient, gave no clinical evidence of syphilitic infection of the central nervous system, nor were there any symptoms of congenital syphilis in the other children. Nothing abnormal was observed in the patient until the fourth year, when it was noticed that his memory was failing and his face had a vacuous expression. He was sent to school in his seventh year but was unable to learn the simplest things. He was severely punished by his teacher because of his being so unruly and difficult to control. At this time also his walking became difficult, and he used his hands in a clumsy manner. The father stated that the deterioration, both mental and physical, had been very rapid during the past year. When first seen he acted in a silly manner; he could not feed himself and needed constant oversight, and he talked like a young child. Examination showed Argyll-Robertson pupils, exaggerated knee-jerks, with ankle-clonus and Babinski in both feet. There was marked Rombergism. There was no nystagmus or epileptiform seizures; the background of the eye was normal. There were no signs of congenital syphilis. Serobiologic findings were increased pressure in the spinal fluid and positive Wassermann in both blood-serum and spinal fluid, the latter in all dilutions down to 0·05 c.c. Lange's colloidal gold test gave the characteristic curve of paresis. Noguchi positive; Fehling's normal; lymphocytosis seventy-two to a cubic millimetre. The patient has received eight intravenous injections, each of 0·25 grm. of salvarsan, followed the next day by an intra-spinal injection of 30 c.c. of 40 per cent. solution of salvarsanized serum. The serobiologic reduction has been very slight. The pressure of the spinal fluid is normal; lymphocytes three to the cubic millimetre. Blood-serum is less

positive, spinal fluid unchanged. The paretic curve of Lange's colloidal gold test remains unchanged. Clinically, improvement has been more noticeable. The boy can now feed himself; his silly actions and vacuous expression have disappeared; he is much brighter mentally, requires less oversight, observes things much more than formerly, shows some interest in games and talks much more normally. His gait is greatly improved. Yet, notwithstanding all this apparent improvement, he has just had his first epileptiform seizure. T. R. Whipham.

## Reviews.

The Child's Diet. By J. Sadler Curgenwen, L.R.C.P., M.R.C.S. Second Edition. 1914. London: H. K. Lewis. Pp. 115. Price 2s. 6d. net.

The object of this little book is to provide the parents and guardians of children with simple instruction in the matter of feeding infants and children; and we doubt if such a work is any less necessary now than ten years ago, when the first edition was published. The writing of such a book must be no easy task. How far may a principle be pressed, what weight may be attached to various exceptions, must be problems which face the author in page after page. Above all, it must be difficult to avoid a certain superiority of knowledge over that of one's readers which is calculated to shame the mother who has failed in a task so apparently simple as feeding her children correctly.

The present author has been very successful in avoiding these difficulties and in this he has been much helped by his gifts for concise and clear writing and his ability to lay stress on the important points which he wishes to emphasise. His advice is on very sound common-sense lines and he is free from fads. And if here and there an undue dogmatism and a strained simplicity make their appearance, we do not think that they in any way diminish the value of the book for the purpose for which it is written.

R. M.

Obiter Scripta, Throat, Nose, and Ear. By A. R. Friel, M.A., M.D., Hon. Physician for the Nose, Throat, and Ear General Hospital, Johannesburg. Bristol: John Wright & Sons, Ltd., 1914. Pp. 40. Price 2s. 6d. net.

This is quite a useful little book, written in a chatty way. It contains but three chapters, the first relating to tonsil hæmorrhage, electrolysis for vasomotor rhinitis, hysterical aphonia, histology of aural discharges, and the like—a miscellaneous collection. The second chapter deals with zinc ionisation, which Dr. Friel considers ideal for chronic middle-ear suppuration. The third and last section discusses the treatment of ozœna.

M. Y.

Medical and Surgical Reports of the Episcopal Hospital. Vol. II. Philadelphia: Press of Wm. J. Dornan, 1914.

This volume, like its predecessor (*v.* British Journal of Children's Diseases, 1914, xi, p. 144) contains a large number of instructive papers by members of the visiting and resident staff. Among those of pædiatric

interest are the following: "Superficial Gummata," by Warren Walker, with illustrations of cases of hereditary syphilis; "Primary Tuberculosis of the Patella, Excision, and Myoplasty," by E. G. Allkarder, in a boy aged 11 years; "Congenital Ankyloblepharon," by Harold G. Goldberg; "A Case of Lues with Labyrinthine Involvement," by John P. Gallagher and J. Walker Moore, in a boy, aged 14 years, successfully treated by neo-salvarsan; and "Imperforate Rectum," by Ashley P. C. Ashhurst, in which proctoplasty was performed when the child was fourteen days old and was followed by a secondary operation four years later to close a false anus. J. D. R.

Dr. M. H. Gordon's Report to the Local Government Board on an Experimental Investigation in relation to Mumps or Epidemic Parotitis. Reports of the Local Government Board: Public Health and Medical Subjects (New Series, No. 96). 1914. London: T. Fisher Unwin. Price 1s. 6d.

This valuable report is divided into two parts. In the first three sections of the first part the author gives a general description of mumps and its complications, discusses the clinical pathology and histological changes in the parotid gland, and reviews previous work on the ætiology of the disease. In the fourth section he relates his own experiments. Ten monkeys, an equal number of M. Cynomolgus and M. Rhesus being used, received an intra-cerebral injection of a filtrate of saliva from a series of cases in the acute stage of mumps. Four died, one developed an illness from which it recovered, and five were apparently not affected. The symptoms, which were those of meningeal irritation, developed in one to two days after injection. The autopsy showed a variable degree of lymphocytic meningitis, well-marked hyperæmia of the central nervous system, with a few small hæmorrhages into the grey matter, degeneration in some of the nerve cells, and increase of the glia cells. The monkey which survived longest showed acute interstitial parotitis, together with interstitial hepatitis and fatty degeneration of the liver and kidneys.

Dr. Gordon concludes that mumps is due to a filtrable virus comparable to that of poliomyelitis, smallpox, typhus, and other acute specific fevers.

The second part of the report contains an account of a fatal illness of children associated with acute interstitial parotitis. Between May and September, 1913, twelve children, aged from 10 months to 9 years, were admitted to St. Bartholomew's Hospital with pyrexia, diarrhœa, vomiting, and collapse. All died in from twenty-four hours to twelve days. Post mortem the most frequent change found was enlargement of the mesenteric lymph glands. Histologically the most striking feature was acute interstitial parotitis, which was present in eleven cases, with one doubtful exception. Experiments on monkeys by injection of emulsions of the central nervous system or of the parotids proved negative. The nature of the virus could not, therefore, be determined. J. D. R.